

IN THE CLAIMS:

1 1. (Currently Amended) An on-off control circuit between an IEEE
2 1394a and IEEE 1394b compliant physical layer output driver circuitry and an
3 optical transceiver, the on-off control circuit comprising:
4 a comparator having a first input for receiving an input signal from the
5 output driver circuitry and an output for providing an output signal to the optical
6 transceiver;
7 a reference voltage source coupled to a comparator second input; [[and]]
8 a feedback network coupled to the second input for providing a hysteresis
9 window[[.]]; and
10 wherein the optical transceiver is enabled during a period in which the
11 output driver circuitry is sending a tone, and disabled during an interval between
12 tones.

1 2. (Original) The control circuit of claim 1, wherein the comparator is a
2 high speed voltage comparator.

1 3. (Currently Amended) The control circuit of claim 1, wherein the input
2 signal comprises an output common mode voltage ~~an output signal of an IEEE~~
3 ~~1394 compliant physical layer output driver circuit.~~

4. (Currently Amended) The control circuit of claim 1, wherein the
5 output signal is coupled to a transmit enable bar input of the optical transceiver
~~glass fiber optical physical medium dependent sub-layer.~~

1 5. (Canceled) An optical transmitter control circuit comprising:

2 a comparator having a first input coupled to an output common mode
3 voltage of an IEEE 1394 PHY and an output coupled to an optical transmitter
4 input;
5 a voltage reference source coupled to a comparator second input; and
6 a feedback network coupled to the comparator second input.

1 6. (Canceled) The optical transmitter control circuit of claim 5, wherein the
2 output common mode voltage is provided by an IEEE 1394 PHY TPB+/-
3 termination network.

1 7. (Canceled) The optical transmitter control circuit of claim 5, wherein the
2 comparator is a high speed voltage comparator.

1 8. (Canceled) The optical transmitter control circuit of claim 5, wherein the
2 voltage reference source comprises a voltage divider.

1 9. (Canceled) The optical transmitter control circuit of claim 5, wherein the
2 termination network is coupled to the first input through a resistor.

1 10. (Canceled) The optical transmitter control circuit of claim 5, wherein the
2 termination network provides a differential pair common mode voltage signal.

1 11. (Canceled) The optical transmitter control circuit of claim 5, wherein the
2 first input comprises a negative input and the second input comprises a positive
3 input.

1 12. (Canceled) The optical transmitter control circuit of claim 5, wherein the
2 optical transmitter input comprises a transmit enable bar input.

- 1 13. (Canceled) An optical transmitter control circuit coupled between an
2 IEEE 1394 PHY TPB+/- termination network and an optical transmitter
3 comprising:
4 a comparator having a first input coupled to the termination network and
5 an output coupled to an optical transmitter input;
6 a voltage reference source coupled to a comparator second input; and
7 a feedback network coupled to the comparator second input.
- 1 14. (Canceled) The optical transmitter control circuit of claim 13, wherein the
2 comparator is a high speed voltage comparator.
- 1 15. (Canceled) The optical transmitter control circuit of claim 13, wherein the
2 voltage reference source comprises a voltage divider.
- 1 16. (Canceled) The optical transmitter control circuit of claim 13, wherein the
2 termination network is coupled to the first input through a resistor.
- 1 17. (Canceled) The optical transmitter control circuit of claim 13, wherein the
2 termination network provides a differential pair common mode voltage signal.
- 1 18. (Canceled) The optical transmitter control circuit of claim 13, wherein the
2 first input comprises a negative input and the second input comprises a positive
3 input.
- 1 19. (Canceled) The optical transmitter control circuit of claim 13, wherein the
2 optical transmitter input comprises a transmit enable bar input.

1 20. (Canceled) An optical transmitter control circuit coupled between an
2 IEEE 1394 compliant physical layer output driver circuitry and a glass fiber
3 optical physical medium dependent sub-layer comprising:
4 a comparator having a negative input coupled to the output driver circuitry
5 and an output coupled to a glass fiber optical physical medium dependent sub-
6 layer transmit enable bar input;
7 a voltage divider providing a reference voltage of about half a differential
8 pair output common mode voltage to a comparator positive input; and
9 a feedback network coupled to the comparator positive input for
10 eliminating oscillation.

1 21. (Canceled) The optical transmitter control circuit of claim 20, wherein the
2 comparator is a high speed voltage comparator.

1 22. (Canceled) The optical transmitter control circuit of claim 20, wherein the
2 output driver circuitry is coupled to the negative input through a resistor.

1 23. (Canceled) The optical transmitter control circuit of claim 20, wherein the
2 output driver circuitry provides the differential pair output common mode voltage.

1 24. (Canceled) An optical transmitter control circuit comprising:
2 a comparator having a negative input coupled to a termination network
3 and an output coupled to an optical transmitter transmit enable bar input;
4 a voltage divider coupled to a comparator positive input; and
5 a feedback network coupled to the comparator positive input for providing
6 a hysteresis window.

1 25. (Canceled) The optical transmitter control circuit of claim 24, wherein the
2 termination network comprises an IEEE 1394 PHY TPB+/- termination network.

1 26. (Canceled) The optical transmitter control circuit of claim 24, wherein the
2 comparator is a high speed voltage comparator.

1 27. (Canceled) The optical transmitter control circuit of claim 24, wherein
2 the termination network is coupled to the negative input through a resistor.

1 28. (Canceled) The optical transmitter control circuit of claim 24, wherein the
2 termination network provides a differential pair common mode voltage signal.

1 29. (Canceled) An optical transmitter control circuit coupled between an
2 IEEE 1394 compliant physical layer output driver circuitry and a glass fiber
3 optical physical medium dependent sub-layer comprising:
4 a comparator having a negative input coupled to the output driver circuitry
5 and an output coupled to a glass fiber optical physical medium dependent sub-
6 layer transmit enable bar input;
7 a voltage divider providing a reference voltage to a comparator positive
8 input; and
9 a feedback network coupled to the comparator positive input for providing
10 a hysteresis window.

1 30. (Canceled) The optical transmitter control circuit of claim 29, wherein the
2 comparator is a high speed voltage comparator.

1 31. (Canceled) The optical transmitter control circuit of claim 29, wherein the
2 output driver circuitry is coupled to the negative input through a resistor.

1 32. (Canceled) The optical transmitter control circuit of claim 29, wherein the
2 output driver circuitry provides a differential pair common mode voltage signal.